3.12 TRANSPORTATION

3.12.1 Introduction

This section documents the potential transportation impacts of the proposed project analyzed in this EIS. The report is divided into four main sections.

- **Existing Conditions** – documents the current conditions within the study area. Existing intersection geometry and traffic volumes are used to evaluate the existing levels of service at the study area intersections. Transit service available in the area, existing non-motorized facilities, and traffic safety at the study area intersections and roadways adjacent to the site are also discussed in this section.
- **2007 No Action Alternative** – documents the conditions expected within the study area in the year 2007 without development of the project. The analysis includes any roadway improvements within the study area, any changes to the existing transit service, and any changes in the non-motorized facilities. It also recognizes other developments on the larger Sand Point site, such as the North Shore Recreation Area, the Community Gardens and reuse of buildings on-site formerly occupied by the Navy, and includes other non-park projects already in the "pipeline" for the study area. These on-site developments were covered programmatically in the 1996 Reuse Project FEIS and/or subsequently in other project-specific environmental documentation.
- **Proposed Action (Horizon Year 2007)** – documents the impacts of the proposed action at full build-out and less than full build-out conditions. The analysis compares the 2007 With-Project condition (see note above on timing) to the 2007 No Action condition in order to establish the transportation-related impacts of the proposed project.
- **Lesser-Capacity Alternative (Horizon Year 2007)** – documents the impacts of the alternative plan. As with the analysis of the proposed action, this analysis compares the impacts of the lesser-capacity alternative for year 2007 to the 2007 No Action condition.
- **Mitigation** –any improvements needed to offset the impacts of the proposed project are discussed and summarized in this section.

Though the EIS describes a construction phasing plan (see **Section 2.2.12**) that spans through year 2012, the time horizon used for the transportation analysis assumes full buildout of the new park facilities in 2007. Applying full buildout traffic with the project to the expected future baseline conditions in year 2007 does front load, to a considerable degree, the anticipated traffic generated by the project and might overestimate the level of impacts that could actually occur by that time. The Department of Parks and Recreation intends to engage in aggressive fund-raising to support the project, however; if successful, it is conceivable that the project could be completed within about 5 years rather than the longer period assumed in the phasing plan. The 2007 time horizon adopted for the traffic analysis corresponds to the period covered in the City's current 6-year Transportation Improvement Plan and Capitol Improvement Plan. These plans outline the future improvements needed to address the expected growth in traffic for the next 6 years. Analyzing projected traffic volumes beyond the 6-year period would not account for any transportation improvements that would be needed to accommodate future growth beyond this time period. It was also recognized that the further traffic is forecast into the future, more variables and assumptions need to be employed and the analysis becomes less reliable.

3.12.1.1 Study Approach

The study area for the traffic analysis was initially determined following site visits and coordination with staff at the Seattle Department of Construction and Land Use (DCLU) (J. Shaw, City of Seattle DCLU, personal communication, October 2001). The study intersections were chosen based on which intersections were anticipated to be affected the most by the proposed project. Project trips were distributed to the local road network based on prevailing traffic patterns and other recent traffic studies applicable to the area. Generally, intersections that would be impacted by more than 20 percent of project traffic were studied, unless an intersection was already known to operate well based on other traffic studies. Several other traffic studies have been conducted over the last few years that have analyzed intersections in the vicinity of the project, and only a couple of intersections have been flagged for potential future congestion problems. These intersections were included in the analysis, as well as other key intersections in the area identified in review comments on the Draft EIS. The study intersections are listed below:

- Sand Point Way NE / NE 70th Street
- Sand Point Way NE / NE 65th Street
- Sand Point Way NE / NE 74th Street
- Sand Point Way NE/NE 95th Street
- 35th Avenue NE/NE 65th Street
- 35th Avenue NE / NE 70th Street
- 35th Avenue NE / NE 75th Street
- 35th Avenue NE / NE 95th Street
- NE 45th Street / Union Bay Place

All nine of the intersections included in the study were evaluated during the weekday PM peak hour of traffic volumes on adjacent streets for the existing conditions. The PM peak hour for traffic on adjacent streets was chosen as the primary time period for the impact analysis because it represents the one hour of the day with highest combined background and project traffic volumes. It is assumed that operations of roadway and intersections in the study area at all other times of day are better, due to lower volumes; a worst case scenario is analyzed. A figure showing the location and geometry of the study area intersections relative to the project site is shown in **Figure 3.12-1**.

3.12.2 Existing Conditions

This section describes the existing conditions in the vicinity of the site, including the existing street system, traffic volumes, parking, transit, non-motorized facilities, and operational analyses of the study area intersections.

3.12.2.1 Roadway Network

The study area roadways and intersections in the project vicinity are discussed below.

Figure 3.12-1
Study Area Intersections/Lane Geometry

Sand Point Way NE provides access southbound to the University and Montlake neighborhoods and beyond to I-5 and SR-520, and access northbound to Lake City and the northern suburbs. Adjacent to the project site, Sand Point Way NE is classified as a minor arterial and has four lanes, two in each direction. North of NE 74th Street, the roadway narrows to two lanes. South of NE 65th Street, Sand Point Way NE is designated as State Route 513 (although Washington Department of Transportation and City staff have discussed possible relinquishment of the state route designation). Traffic signals control the intersections at NE 65th Street and NE 74th Street. A sidewalk is provided on the east side of Sand Point Way from NE 65th Street to NE 74th Street. There are no pedestrian facilities on the west side of the street.

NE 70th Street is a two-lane collector arterial that provides access from the Park to the west and to the I-5 ramps at NE 80th Street via 35th Avenue NE and NE 75th Street. To the west of Sand Point Way NE, there are sidewalks and on-street parking on both sides of the street. The intersection at Sand Point Way NE is controlled by a Stop sign.

NE 65th Street and **NE 75th Street** are two-lane roadways providing access from Sand Point Magnuson Park to the west. NE 65th Street is classified as a minor arterial and NE 75th Street is classified as a collector arterial. Sidewalks and on-street parking exist along both streets.

35th Avenue NE is a north-south minor arterial, located approximately a mile to the west of the project site. It is a two-lane street south of NE 75th Street with parking on both sides of the street. North of NE 75th Street, there are parking restrictions during the morning and evening commute times that result in two lanes of travel in the peak direction – southbound in the morning and northbound in the evening. Traffic signals control the intersections at NE 65th, NE 70th, NE 75th, and NE 95th Streets.

Internal Roadways are located throughout the site and provide internal circulation and access to the various parts of the existing park. Several roadways within the Park (such as NE 65th, NE 74th and NE 77th Streets and 62nd and 63rd Avenues NE) are classified as public rights-of-way, while others (Sportsfield Drive and Beach Drive) are categorized as park roads. The internal roadways were originally designed to support aircraft operations at the former naval station and do not necessarily provide ideal internal connections between various destinations within the site. The park and project site can currently be entered via two access points from Sand Point Way NE: at the park's main entrance, located on the east side of Sand Point Way NE at NE 704th Street; and at NE 65th Street. From the eastern terminus of NE 65th Street, the boat launch, beach swimming and picnic areas, and Kite Hill parking can be accessed via Beach Drive. Sportsfield Drive and 62nd Ave NE provide access from NE 65th Street northward into the park. Internal roadways from the north entrance, northward include 63rd Ave NE, NE 77th Street and NE 74th Street, which is the only roadway that provides a connection to the North Shore Recreation Area.

NE NOAA Drive provides access from Sand Point Way to the National Oceanic and Atmospheric Administration facilities. This roadway is grade separated from the park itself and does not provide access to park facilities. There are two gates located on NE NOAA Drive, aligned approximately with 63rd Avenue NE, that provide vehicle access to the large parking lot on the east side of Building 27 and exit access from 63rd Avenue NE. NOAA has allowed park operations to open that gate to vehicles exiting the Building 27 east lot during large special events to assist with in-and-out use of the lot more efficiently during event hours. Continuing this arrangement is difficult to predict with the growing concerns over security for federal facilities. The 1996 Reuse Project EIS identified a future north entrance to the Park from Sand Point Way to be located south of the NOAA road access. Plans for this entrance have not yet been pursued.

From the eastern terminus of NE 65th Street, at the area just west of the boat launch, access to the swimming beach area and the Kite Hill parking lot is provided via Beach Drive. Another roadway provides access to the large parking lot that serves the north Magnuson Park fields (the sports meadow). This roadway is hereinafter referred to as "North Park Fields Drive." Vehicular parking along both sides of both of these roadways occurs, particularly during warm summer weather and special events in this area of the park.

3.12.2.2 Traffic Volumes

Figure 3.12-2 shows the existing PM peak hour traffic volumes for the study area intersections. The traffic volumes are from traffic counts conducted in October and November 2000 and factored to the existing year 2001 with a 2 percent growth rate. This growth rate is based on historical traffic volume growth in the study area.[1] The exact dates of the intersection counts were crosschecked with the field schedule for the Sand Point ball fields to determine the level of activity on those dates. It was noted that none of the park fields were scheduled for games on those dates. In order to assure intersection operations are examined for a period of high park activity, the previous counts were also increased by a number of vehicle trips that would occur had the existing ball fields at Sand Point been scheduled for games.[2]

3.12.2.3 Intersection Operations

Operational analyses were conducted to evaluate the performance of intersections in the study area for the existing traffic conditions. The level of service concept is used to evaluate and quantify operating conditions and traffic congestion at intersections. Level of service values range from LOS A, which indicates free-flow traffic, to LOS F, which indicates extreme congestion and long delays.

Peak hour levels of service (LOS) were calculated at the study area intersections using methodology published in the 2000 Highway Capacity Manual (HCM, Transportation Research Board Special Report 209). **Table 3.12-1** summarizes the resulting PM peak hour levels of service for existing conditions. **Appendix D** contains a description of the signalized and unsignalized intersection level of service criteria.

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[1] New counts were not collected for this analysis. At the time of the analysis Children's Hospital was using a parking lot near Building 193 for a park-and-ride shuttle service as a temporary solution to their parking shortage during construction at the Medical Center. Other facilities, such as the National Archives and Records Administration building and the Center for Spiritual Living, both located on Sand Point Way south of the Park, also provide parking spaces on a temporary basis for the Children's Hospital shuttle. A parking garage is currently being built as part of the Master Plan for Children's Hospital to solve the parking problem. The shuttle service will no longer be needed or exist once the parking garage is completed, which is anticipated to occur before the proposed Sand Point Magnuson Park project begins. However, due to the impacts of the many vehicles parking on these off-site lots and the trips associated with this arrangement during the PM peak hour of adjacent streets, new traffic counts would likely have significantly overestimated future traffic volumes in the study area, particularly at intersections nearest the Park.

[2] The methodology for estimating the number of trips and the distribution of those trips is the same as that used to estimate new trips and distribution associated with the new fields included in the proposed action and is described in detail later in Section 3.12.

Figure 3.12-2
Existing PM Peak-Hour Traffic Volumes

Table 3.12-1
Existing Levels of Service

	Existing Conditions		
	LOS[1]	Delay[2]	V/C[3]
PM Peak Hour			
NE 65th Street/Sand Point Way NE	A	6.2	0.44
NE 70th Street/Sand Point Way NE[4]	C	19.2	n/a
NE 95th Street/Sand Point Way NE	D	34.7	n/a
NE 65th Street/35th Ave NE	B	15.8	0.80
NE 70th Street/35th Ave NE	A	5.8	0.53
NE 74th Street/Sand Point Way NE	A	4.1	0.28
NE 75th Street/35th Ave NE	C	33.4	0.96
NE 95th Street/35th Ave NE	A	7.6	0.55
NE 45th Street/Union Bay Place	F	102.9	1.20

1. Level of Service
2. Delay in seconds per vehicle
3. Volume to capacity ratio (not applicable for unsignalized intersection)
4. This intersection is currently unsignalized so LOS and Delay are reported for the worst movement and the V/C ratio is not applicable.

As shown in the table, except for the NE 45th Street/Union Bay Place intersection, the study area intersections currently operate at LOS D or better during the PM peak hour. The LOS D conditions indicate that adequate capacity exists at the intersections. The NE 45th Street/Union Bay Place intersection currently operates at LOS F during the PM peak hour. The LOS F condition indicates congestion and more lengthy delays during the peak hours. Level of service worksheets are provided in **Appendix D**.

3.12.2.4 Queuing Analysis

A queuing analysis (a study of the lines, or queues, of vehicles formed when they must wait to pass through an intersection, and the storage capacity of the roadways) was conducted for the existing, 2007 No Build and 2007 Proposed Action for all the study area intersections. The Synchro, v. 5 software program was used to analyze the 95th percentile queues at the intersections. The 95th percentile queue represents the queues resulting from the 95th percentile traffic flows and therefore reflects the relative worst-case queuing at the intersections.

The queuing analysis indicated that during the existing PM peak hour, all intersections except NE 45th Street/Union Bay Place have adequate capacity to accommodate the peak hour queues. Left turn queues along Union Bay Place are expected to extend approximately 400 feet beyond the available left-turn lane storage capacity. Eastbound left-turns on NE 45th Place are expected to extend approximately 200 feet beyond the available left-turn lane storage capacity. The analysis indicated that the existing storage capacity would be able to accommodate all other movements during the existing PM peak hour.

3.12.2.5 Traffic Safety

Accident data for the study area intersections were obtained from the Seattle Transportation Department (SEATRAN). **Table 3.12-2** summarizes the most current, complete set of 5-year accident data history available, from January 1997 through October 2001.

Table 3.12-2
Accident Summary - (1997 to 2001)

Location	1997	1998	1999	2000	2001	Five Year Total	Annual Average
NE 70th Street/35th Ave NE			-	2	1	3	0.6
NE 70th Street/Sand Point Way NE			1	2	2	5	1.0
NE 75th Street/35th Ave NE	5	8	5	4	6	28	5.8
NE 95th Street/35th Ave NE	4	2	2	1	1	10	2.1
NE 65th Street/Sand Point Way NE	2	1	2	1	2	8	1.7
NE 45th Street/Union Bay Place	10	7	3	6	4	30	6.21

SEATRAN typically considers an intersection to potentially be a high-accident location if it is signalized and has 10 or more accidents per year or if it is unsignalized and has 5 or more accidents per year. Based on this general guideline, the NE 75th Street/35th Avenue NE intersection and the NE 45th Street/Union Bay Place intersection would be considered high accident locations. The majority of the accidents at the NE 75th Street/35th Avenue NE intersection were left turning accidents or right angle accidents. This intersection has permissive left turns requiring drivers to yield to on coming traffic before making a left turn.

3.12.2.6 Transit Service

King County Metro provides transit service to the Park (and indirectly to the project site) via Routes 74 and 75. Along Sand Point Way NE the nearest transit stops (three northbound and three southbound) are located approximately 1/8 mile from the western edge of the project site. Route 74 provides service between Sand Point, the University District and Queen Anne via Fremont, with headways of approximately 30 minutes throughout the day. Route 74 also provides limited express service between northern Seattle and Downtown during the morning and evening commute hours. Route 75 serves Northgate and Ballard with 15- to 20-minute headways in the peak morning and evening commute times and 30-minute headways in the mid-day off-peak times.

3.12.2.7 Non-Motorized Facilities

The Burke Gilman Trail, which parallels the western edge of the project site on the opposite (west) side of Sand Point Way, is the primary non-motorized facility in the study area. Crosswalks exist where the trail crosses NE 65th, NE 70th, NE 77th Streets, and Inverness Drive. A sidewalk is also provided on the east side of Sand Point Way NE, adjacent to the Sand Point Magnuson Park frontage, with a sidewalk

connection to the trail. There are no pedestrian facilities on the west side of Sand Point Way NE, creating vehicle conflicts for pedestrians and bicyclists. No sidewalks exist on the east side of Sand Point Way NE from NE 74th Street to approximately NE 77th Street. Potential pedestrian conflicts exist due to on-street parking.

Internal sidewalks are limited to the western and central portions of the park, primarily in front of buildings within the historic Community Campus area. No pedestrian facilities (sidewalks) are provided along Sportsfield Drive, along the roadway to the north field parking, along NE 65th to the boat launch area, nor along the roadway connection to the North Shore Recreation Area. Several trails exist within the park, including recently constructed (in 2001) trails such as the Cross Park Trail and former airfield service roads such as the Lake Promenade.

There are no designated bicycle lanes or paths on the project site. Bicycles must share the roadway with motorized vehicles. Currently, bicycle racks are provided at the exercise station near Promontory Point, on the west side of Building 47, at both the north and south sides of Building 30, in front of Building 406 and at the southeast corner of Building 5.

3.12.2.8 Parking

The parking capacity within the boundaries of the park is approximately 3,000 vehicles. Of those, nearly two-thirds are in parking lots with marked spaces and the remaining third are along roadways or in unmarked (unpainted) lots. The Sand Point Overlay District, an overlay to the underlying zoning controls, specifically states that the required parking supply for any use within the park may be provided anywhere within the Overlay District, including on public rights-of-way.[3]

Utilization of the on-site parking supply was measured in August of 2001, and reflects generally higher summer-season use of the park. During the week, peak utilization occurred at around 1:00 pm when 723 parked vehicles were counted; approximately one-fourth of the parking supply was occupied[4]. On a Saturday, peak parking also occurred around 1:00 pm when approximately 16 percent of the parking supply was occupied.

In 2000 and 2001, approximately 75 special events were hosted at the park throughout the year. The majority of these events do not have distinct short-term activity peaks, but rather several hours of in-and-out traffic flows by attendees. At these times, parking demand in certain areas of the park can exceed the supply in those areas closest to the event, with event visitors parking in other areas of the park. On rare occasions (approximately one or two times per year) excess demand from events results in parking spillover into neighborhoods along Sand Point Way NE. Though the parking supply on-site is adequate to meet site-generated parking demand, even during special events, the walking distance and inefficient internal roadway and pedestrian connections lead to underutilization of some of the on-site parking supply. Park staff is currently reviewing management of the on-site parking supply and special events to make better use of the on-site parking supply, particularly during special events. Parking patterns at the park boat launch during peak seasonal conditions (summer and early fall) are also under review.

[3] SMC 23.72.012.

[4] This included 350 vehicles parked near Building 193 that were associated with the Children's Hospital shuttle. As noted in a previous footnote, Children's Hospital temporarily leased this space during construction of new facilities at Children's Hospital main campus.

3.12.3 2007 No Action Alternative

To properly evaluate the impacts associated with the proposed action, it is first necessary to assess the future without-project conditions or no action alternative in the area. After describing these conditions, project-generated impacts are identified by comparing future without- and with-project conditions.

3.12.3.1 Traffic Volumes

Weekday PM peak hour traffic volumes generated by "pipeline" projects were added to existing peak hour volumes in order to project future No-Build PM peak hour volumes. "Pipeline" projects are defined as proposed off-site developments, of such a size and location as to potentially add noticeable new traffic within the study area, that have applied for permits and are anticipated to be completed before the development of the proposed project. Traffic associated with the following proposed "pipeline" projects were incorporated into the study:

- Pre-approved Sand Point Magnuson Park Redevelopment
- University of Washington Radford Court Married Student Housing
- Children's Hospital & Regional Medical Center Master Plan
- Children's Hospital Sand Point Office
- University Village Expansion

Additionally, development and reuse projects within the boundaries of the park that are anticipated to occur before 2007 are also taken into account. This includes development of the North Shore Recreation Area, development of the Community Gardens, new or changed occupancy of several buildings on campus and construction of a new building that will provide transitional housing. Reuse plans and new facilities were described in the October 1996 FEIS. That EIS was programmatic in nature. To the extent possible, park facility uses were updated (through discussions with Sand Point Magnuson Park staff) to reflect the latest known type of occupancy anticipated for 2007 conditions. In the case of buildings that were just partially occupied in 2000 during the period that intersection counts were taken, an increase in weekday PM peak hour trips was estimated to account for that portion of the ultimate land use that was at the time (fall 2000) unoccupied. Those trips for future occupancy of other Sand Point Park facilities were assumed for the future No Build condition and added into the intersection volumes for 2007. Details of the trip generation for those portions of the park that were and are not fully redeveloped are provided in **Appendix D**.

Construction of pending and future projects under the existing Sand Point Reuse Plan would generate temporary construction-related traffic and parking impacts in the vicinity of the project site (City of Seattle, 1996). Most of the projects involve improvements to existing buildings, in which case expected construction impacts are minimal. Those projects that involve the removal of buildings or the hauling of soils, either to or away from the site, will generate additional traffic within and near Sand Point Magnuson Park.

Figure 3.12-3 summarizes future 2007 No Build (without-project) traffic volumes.

Figure 3.12-3
2007 No-Build (Without Project) Traffic Volumes

In addition to "pipeline" traffic an annual growth rate was applied to existing volumes at study intersections to account for any other growth in traffic that may occur in the area. A growth rate of 2 percent per year was applied to the PM peak hour volumes. This rate is based on growth in the study area over the past 3 years, as indicated by Seattle Department of Transportation traffic volume data.

3.12.3.2 Planned Improvements

There are two planned roadway improvement projects that will increase capacity at study area intersections. These improvements are anticipated to be complete before the horizon year for this study of 2007. Therefore, the following improvements were incorporated into the analysis for the No Build and the proposed action conditions:

- An additional southbound left-turn lane on the Union Bay Place approach will be added to the NE 45th Street/Union Bay Place intersection, as mitigation for the University Village expansion.
- A new signal at 70th Street/Sand Point Way NE will be provided as mitigation for the Children's Hospital office development at that location.
- A sidewalk will be built along the Park Point Condominium property and the new Children's Hospital office building, to provide pedestrian access on the west side of Sand Point Way between NE 65th Street and NE 70th Street.

3.12.3.3 Intersection Operations

Weekday PM peak hour levels of service were calculated at study intersections for future No Action (without project) conditions in the horizon year of 2007. The calculations for the No Action condition incorporates the anticipated increased in future traffic volumes and future improvements or changes that are anticipated to be incorporated by the year 2007. The results of these calculations are shown in **Table 3.12-3**, including intersection levels of service and average delays.

Table 3.12-3
No-Action Condition Levels of Service

	No Action Conditions		
	LOS[1]	Delay[2]	V/C[3]
PM Peak Hour			
NE 65th Street/Sand Point Way NE	B	16.8	0.88
NE 70th Street/Sand Point Way NE	B	13.6	0.83
NE 95th Street/Sand Point Way NE	F	>50	n/a
NE 65th Street/35th Ave NE	D	41.7	1.02
NE 70th Street/35th Ave NE	B	10.3	0.75
NE 74th Street/Sand Point Way NE	B	14.3	0.74
NE 75th Street/35th Ave NE	F	96.9	1.25
NE 95th Street/35th Ave NE	B	11.7	0.66
NE 45th Street/Union Bay Place	F	150.9	1.54

1. Level of Service
2. Delay in seconds per vehicle
3. Volume to capacity ratio (not applicable for unsignalized intersection)

As shown in the table, except for the NE 45th Street/Union Bay Place, NE 95th Street/Sand Point Way NE and NE 75th Street/Sand Point Way NE intersections, the study area intersections currently operate at LOS B or better during the PM peak hour. The LOS B conditions indicate that adequate capacity exists at the intersections. The NE 45th Street/Union Bay Place intersection currently operates at LOS F during the PM peak hour. The LOS F condition indicates congestion and more lengthy delays during the peak hours. The intersection of NE 95th Street/ Sand Point Way NE is expected to operate at LOS F by 2007 No Action conditions, due to the increase in traffic volumes from background traffic growth and pipeline volumes. This intersection is currently unsignalized and there are no plans to signalize it in the future. The intersection of NE 75th Street/35th Avenue NE operates at LOS C in existing conditions. The intersection degrades to LOS F in the No Action condition due to the increased traffic growth in the future. Level-of-service worksheets are provided in **Appendix D**.

3.12.3.4 Queuing Analysis

An additional southbound left-turn lane on the Union Bay Place approach will be added to the Sand Point Way NE/Union Bay Place intersection by 2007. This will be provided as mitigation for the University Village project. The addition of this left-turn lane will improve queues along this leg of the intersection. It is expected that queues along Union Bay Place will extend approximately a maximum of 250 feet, a decrease in approximately 200 feet from the existing PM peak hour queues. However, the southbound left-turn queue on this leg of the intersection may extend past the available storage capacity. The exact proposed storage capacity of the proposed improvements on this leg of the intersection is not known at this time. The eastbound left-turn queues on NE 45th Place are expected to increase 32 feet from the existing PM peak hour, extending approximately 320 feet. The existing available storage capacity is approximately 70 feet.

Additionally, the southbound left-turn queue at the intersection of NE 65th Street/Sand P Point Way is expected to exceed the available capacity by the 2007 No Build. The existing capacity of the southbound left-turn is approximately 60 feet. The southbound left-turn queue is expected to extend approximately 185 feet from the stop bar.

3.12.3.5 Transit Service

King County Metro's Six Year Transit Development Plan for 2002-2007 sets forth objectives and strategies for transit, paratransit, rideshare services and supporting capital facilities in King County, and will establish the policy basis on which annual operating and capital program decisions will be made. There were no transit service changes outlined or documented in this plan for the Sand Point area, so service is anticipated to remain as it currently exists at the site. The new signal at Sand Point Way/NE 70th Street will include a protected pedestrian crossing of Sand Point Way. This will help accommodate pedestrians utilizing transit service on the west side of Sand Point Way NE.

3.12.4 Impacts of the Proposed Action

This section describes the expected future conditions in the vicinity of the project site with the proposed action. The conditions addressed include traffic volumes, planned improvements, parking, transit, non-motorized facilities, and operation of the study area intersections.

3.12.4.1 Proposed Action Description

All components of the proposed action are described in detail in **Section 2.2** of this EIS. **Section 3.12.4** describes the key elements related to vehicle trip generation. In general, the proposed action includes:

- 4 natural-grass fields with no lighting (primarily for soccer)
- 6 all-weather, synthetic-surfaced fields with lighting (5 primarily for soccer and 1 for rugby)
- 5 all-weather, synthetic-surfaced baseball/softball fields with lighting
- expanded/enhanced wetland/habitat area of 65 acres (includes the removal of the existing interior parking lot and access road)
- vehicle and pedestrian circulation routes

3.12.4.2 Construction Impacts

Construction-related traffic impacts from the proposed action would occur in varying degrees throughout the construction process. These impacts would primarily occur within the project site, but could be noticeable elsewhere within the park and off-site on local streets on an intermittent basis. The primary sources of construction-related traffic impacts would be construction workers traveling to and from the job site, deliveries of construction supplies and equipment, and hauling of materials (such as soil and other aggregate products, construction and demolition waste, etc.) that need to be imported to or exported from the site. (It should be noted that soil excavated from the wetland construction areas would be used to the extent possible as fill material for the sports fields.)

It is anticipated that construction workers would arrive at the construction site before the AM peak traffic period on local area streets and depart the site prior to the PM peak period; construction work shifts typically begin by 7 AM and end by 4 PM, while the corresponding peak traffic periods typically occur an hour or so later. The number of workers at the project site at any one time would vary depending upon the nature and construction phase of the project.

The presence of a temporary construction work force would also increase the demand for on-site parking. It is anticipated that temporary parking lots would be established near key locations of construction activity to address this demand; combined with the existing on-site parking supply, which is typically under-utilized on weekdays, there should be ample on-site parking supply to accommodate this temporary increase in demand without adversely affecting parking use by park visitors.

The demolition of selected existing buildings on the project site and subsequent removal of building materials would represent a primary potential construction-related traffic impact of the project. (It should be noted that this activity would occur with or without the proposed project, however, as explained in **Section 2.4**.) The largest building slated for demolition and removal is Building 193, the former Navy Commissary, which is one of the largest structures on the Sand Point site. This activity would require hauling of demolition materials by truck on adjacent roads for the duration of the demolition activity, which would likely be several months. In addition, plans for construction of the sports fields indicate that approximately 60,000 cubic yards of sub-base fill materials (sand and gravel) for the sports fields would need to be delivered to the project site. This project need represents a considerable level of truck traffic to and from the project site over a period of several years. Truck traffic associated with building demolition and fill material hauling would be noticeable on park roads and on selected local streets near Sand Point Magnuson Park, and could disrupt normal operation of the park entrances.

In conjunction with the Sand Point Reuse Plan, the Department of Parks and Recreation has employed a Construction Management Plan (City of Seattle, 1998) to guide project activities at Sand Point Magnuson Park. This plan specifies procedures for construction traffic and parking that would be applicable to the proposed action, and would serve to limit the potential traffic and parking impacts from project construction activity. Prior to the start of construction for this project the CMP will likely be updated to current conditions.

3.12.4.3 Weekday PM Peak Hour Trip Generation

Standard trip generation rates from the ITE Trip Generation Manual do not accurately address the unique land uses of this proposed project. To calculate trip generation for the proposed sports fields and wetland/habitat complex, information from a recent study Transpo conducted for a King County regional park and field scheduling information from the Seattle Department of Parks and Recreation were used.

The King County Regional Park study involved many uses similar to the proposed project. Both projects include similarly scheduled ball fields and also incorporate a trail system. Trip generation for the King County Regional Park study was based on the existing trip generation characteristics at Fort Dent Park in Tukwila and the Red Town Trailhead at the Cougar Mountain Regional Wildland Park near Issaquah. Fort Dent has 4 baseball fields and 5 soccer fields that have lighting and would be scheduled similarly to the proposed Sand Point Magnuson Park fields. The Red Town Trailhead provides pedestrian and hiking trails through the park's wildland nature areas.

For the King County Regional Park study, daily (24-hour) traffic volumes were collected at the Fort Dent Park entrance/exit between Tuesday, September 15, 1998 and Sunday, September 20, 1998. Although both practices and games generate vehicular traffic, games generate consistently more traffic than practices. Therefore, peak hour trip rates, per field, were established for both scheduled soccer and softball (or baseball) games during an average weekday. These rates were based on hourly traffic volumes collected at the park's entrance/exit and the scheduled game times. The weekday and weekend peak hour corresponds with the hour that captures primarily outbound trips associated with the completion of one game and primarily inbound trips associated with the next scheduled game.

Based on the traffic counts, a weekday soccer game generated approximately 70 trips (half inbound/half outbound). Similarly, a weekday softball or baseball game generated approximately 60 trips (also half inbound/half outbound). The bulk of these trips occur within the half hour before or after the scheduled time for the games. Fields are currently scheduled for games on weekdays beginning at 5:00 PM. This pattern is not anticipated to change. Therefore, field-related trips during the weekday PM peak hour of adjacent streets (4:30-5:30) would be primarily inbound and would be approximately half the number of total trips generated for a weekday game. Therefore, to be conservatively high, it is estimated that a soccer field generates approximately 35 trips, primarily inbound, during the weekday PM peak hour of adjacent streets and a softball or baseball field generates approximately 30 trips, primarily inbound, during the same hour. These rates were compared with peak hour rates for soccer and/or ball fields published in the *Houghton Field Expansion Traffic Impact Study* (Parsons Brinckerhoff, 1997), and the *Transportation Analysis of Cromwell Park Belfield* (The Transpo Group, 1997). Trip rates published in these reports were slightly lower than the rates estimated for the proposed project. These rates were also compared with information provided by the Seattle Department of Parks and Recreation about existing

and future schedules and attendance. The Seattle parks information also supported a slightly lower rate, which also suggests the present trip generation analysis is conservative.

Table 3.12-4 illustrates weekday PM peak and weekend peak hour trip generation rates for the new athletic fields of the proposed action.

The area devoted to the wetland/habitat complex currently provides open space for unstructured recreation. The modifications proposed to this area would not significantly increase the area available to public use. However, the provision of the new trail system and educational resources would attract new visitors or visitors currently focusing on other areas of the park, such as the beach area. It was assumed that the newly renovated trail system would generate additional trips over the existing use. For conservative trip generation purposes it was assumed that the renovation would be the use equivalent of a new trail system.

Table 3.12-4
Trip Generation Rates for Field Use

Field Use	Weekday PM Pk. Hr.
All-Weather Field (Soccer, Rugby, Ultimate Frisbee)[1]	35 trips/field
Ballfield (Softball or Baseball)[2]	30 trips/field
Trail System[3]	20 trips/system

1. *All-Weather Fields are anticipated to be used by several uses including soccer, rugby, and ultimate Frisbee. It is anticipated that the soccer use would be the heaviest user of these fields and would also generate similar trips as the other uses if not more. Therefore, the trip generation results for the fields are mainly based on a soccer use but would be similar to that of other planned uses. Peak hour trip rates for soccer games are based on traffic volumes generated by scheduled games at Fort Dent Park (Tukwila) between Tuesday, September 15, 1998 and Sunday, September 20, 1998.*
2. *Peak hour trip rates for softball or baseball games are based on traffic volumes generated by scheduled games at Fort Dent Park (Tukwila) between Tuesday, September 15, 1998 and Sunday, September 20, 1998.*
3. *Peak hour trip generation for an unprogrammed trail system is based on traffic volumes generated by the Red Town Trailhead (Cougar Mountain Regional Wildland Park) between Wednesday, September 16, 1998 and Sunday, September 20, 1998.*

Park-generated traffic volumes were estimated based on the peak hour trip rates illustrated in **Table 3.12-4** and the anticipated number of sports fields for the proposed action. As a conservative measure, it was assumed that **all** fields would be scheduled for use, beginning at 5:00 PM. In reality, this is not likely to occur often during the year. Peak hour trip generation estimates for the proposed action are provided in **Table 3.12-5**.

Table 3.12-5
Weekday Peak Hour Trip Generation Estimates

Land Use	Trip Rate	Proposed Action Quantity	Proposed Action Trips (in/out)
Proposed Action			
Soccer/Rugby Fields	35/field	10	350 *(310/40)*
Baseball Fields	30/field	5	150 *(135/15)*
Trail System	20/system	1	20 *(10/10)*
Sub-Total			520 *(455/65)*
Existing to take credit for			
Soccer/Rugby Fields	35/field	3.5	123 *(109/14)*
Baseball Fields	30/field	3	90 *(81/9)*
Sub-Total			213 *(190/23)*
Total Net New Trips			**307 *(266/42)***

Some of the existing soccer and baseball fields on the project site overlap each other and cannot be used simultaneously. Therefore, an equivalent factor was derived for the soccer fields that assume each overlapping field was the equivalent of one half of a full non-overlapping field. Therefore, in considering trip generation the soccer fields do not total a whole number due to the overlapping with the baseball fields.

The majority of the sports field trips would be entering the site during the PM peak hour, because this is when games and practices are typically scheduled to begin, with none or few ending during this time.

3.12.4.4 Trip Distribution and Assignment

Project trips were distributed to the study area street system based on existing traffic volumes and travel patterns in the area. The resulting distribution of project trips is:

40 percent west on NE 95th Street, NE 70th Street, and NE 65th Street
30 percent south on Sand Point Way NE
30 percent north on Sand Point Way NE

Figure 3.12-4 summarizes the detailed trip distribution patterns for the PM peak hour. **Figure 3.12-5** shows the PM peak hour trip assignment for project-generated traffic at the study intersections based on the above distribution.

3.12.4.5 Weekday PM Peak Hour Traffic Volumes with Proposed Action

The net new weekday PM peak hour vehicle trips generated by the proposed action were added to the 2007 No-Build alternative to develop the 2007 Proposed Action volumes. These resulting volumes are shown in **Figure 3.12-6.**

Figure 3.12-4
Project Trip Distribution

Figure 3.12-5
PM Peak-Hour Project Trip Assignment

Figure 3.12-6
2007 Proposed Action (With Project) Traffic Volumes

3.12.4.6 Traffic Volume Impacts

Table 3.12-6 summarizes the proportional increases in PM peak hour traffic volumes attributable to the project at the study intersections. The largest percent increase would occur at nearby intersections on Sand Point Way NE at NE 95th Street, NE 70th Street, NE 74th Street, and NE 65th Street, where the project would increase peak hour traffic volumes by approximately 4 to 7 percent. Increases at other intersections in the study area would be less than 3 percent.

Table 3.12-6
Traffic Volume Impacts

	2007 No-Build	2007 Proposed Action	Proposed Action Increase
Intersection			
NE 70th Street/Sand Point Way NE	2540	2648	4.3%
NE 65th Street/Sand Point Way NE	2840	2963	4.3%
NE 95th Street/Sand Point Way NE	1885	1961	3.9%
NE 65th Street/35th Ave NE	2245	2275	1.3%
NE 70th Street/35th Ave NE	1860	1906	2.5%
NE 74th Street/Sand Point Way NE	2515	2699	7.3%
NE 75th Street/35th Ave NE	3145	3223	2.5%
NE 95th Street/35th Ave NE	2545	2623	3.1%
NE 45th Street/Union Bay Place	5330	5407	1.4%

As shown in Table 3.12-6, traffic from the proposed development is expected to constitute approximately 1 to 7 percent of the total entering traffic during the PM peak hour at study area intersections beyond the immediate vicinity of the site. Traffic volumes can fluctuate on a daily basis by 5 percent or more, due to factors such as seasonal changes and weather conditions. The results of the analysis suggest the proposed development would primarily fall within the range of daily volume fluctuations, thus impacts would likely be unnoticeable to the average driver.

3.12.4.7 Weekday PM Peak Hour Intersection Operations

Based on future with-project traffic volumes, peak hour levels of service were calculated at study intersections for the proposed action. These calculations used the same intersection variables (number of lanes, traffic control, etc.) as were used in evaluating future No-Build conditions. **Table 3.12-7** illustrates the results of these calculations along with the No-Build results for comparison.

As shown in the table, the study area intersections are anticipated to operate at LOS D or better except for three intersections. The NE 45th Street/Union Bay Place, NE 95th Street/Sand Point Way NE and NE 75th Street/35th Avenue NE intersections are anticipated to operate at LOS F conditions. With the addition of the project volumes, level of service remains unchanged at all of the intersections except for two. The intersection of NE 65th Street/Sand Point Way NE and NE 70th Street/Sand Point Way NE are adjacent to the project site and degrade from LOS B to LOS C. This is not a considered a significant impact, as the

intersections still would operate well at LOS C. Level-of-service worksheets are provided in **Appendix D**.

Table 3.12-7
Future Proposed Action (With-Project) Levels of Service

	No Action			Proposed Action		
	LOS[1]	Delay[2]	V/C[3]	LOS[1]	Delay[2]	V/C[3]
Intersection						
NE 65th Street/Sand Point Way NE	B	16.8	0.88	C	34.6	0.89
NE 70th Street/Sand Point Way NE	B	13.6	0.83	C	20.5	0.90
NE 95th Street/Sand Point Way NE	F	>50	n/a	F	>50	n/a
NE 65th Street/35th Ave NE	D	41.7	1.02	D	46.5	1.03
NE 70th Street/35th Ave NE	B	10.3	0.75	B	14.7	0.82
NE 74th Street/Sand Point Way NE	B	14.3	0.74	B	17.4	0.80
NE 75th Street/35th Ave NE	F	96.9	1.25	F	109.2	1.40
NE 95th Street/35th Ave NE	B	11.7	0.66	B	13.9	0.69
NE 45th Street/Union Bay Place	F	150.9	1.54	F	154.5	1.56

1. Level of Service
2. Delay in seconds per vehicle
3. Volume to capacity ratio (not applicable for unsignalized intersection)

3.12.4.8 Queuing Analysis

Under the 2007 Proposed Action condition, the largest increase in queues is expected at the westbound approach at the intersection of NE 65th Street/Sand Point Way. This queue is expected to increase by approximately 100 feet, or four vehicles. There is adequate storage along the east leg of NE 65th Street to accommodate this queue. The southbound left-turn queue at this intersection is expected to increase by approximately 2 vehicles, to approximately 230 feet, under the 2007 Proposed Action, continuing to extend approximately 170 feet beyond the available storage capacity and into the inner southbound through lane, which might require some of the traffic in the inner southbound through lane to shift into the westernmost through lane to clear the intersection.

At the intersection of NE 45th Place/Union Bay Place, queues are expected to increase by less than one vehicle. The eastbound left-turn queue is not expected to experience an increase in queuing, however, it is still expected to extend beyond the available storage capacity, as in the 2007 No Build. The southbound left-turn queue on Union Bay Place is expected to increase by less than one vehicle during the 2007 Proposed Action.

3.12.4.9 Daily Trip Generation

In addition to peak hour trip generation, daily trip generation also was estimated. These estimates are based on the number of trips generated per programmed game and the anticipated number of games scheduled per weekday. The numbers of soccer, softball and/or baseball games per day are estimates for the maximum amount of games that could be scheduled for a typical weekday evening. Games are typically scheduled to start around 5:00 PM and field lighting is only provided until 11:00 PM. On

average, a typical soccer event is scheduled for approximately 2 hours and an average baseball/softball event will last 1.5 hours. Based on scheduling methods in the local area, it was assumed that lighted soccer fields would have 3 games scheduled per weekday and baseball would have 4 games scheduled per weekday. For non-lighted fields, it was assumed that soccer fields would have 2 games per weekday and baseball would have 3 games per weekday. The number of events would vary greatly throughout the year based on the seasonality of each sport, but these assumptions give an estimate for a worse case scenario.

Daily trip generation for the park's trail system is based on the existing number trips generated by the Red Town Trailhead on an average weekday (approximately 260 trips, 130 inbound/130 outbound).

Based on the assumptions outlined above, daily trip generation for the proposed action is estimated to total 3,280 daily trips, of which 2,260 would be net new trips.

3.12.4.10 Transit Service

The proposed action does not include changes in transit service. The Transit Division of King County Metro would determine any future changes in transit service with the project, based on their evaluation of need. It is anticipated that project-related demand for transit service could be accommodated without changes to the existing transit system.

3.12.4.11 Non-Motorized Facilities

A pedestrian boulevard would be established along the north side of NE 65th Street and along Sportsfield Drive. The pedestrian boulevards would be separated from the road by a landscaped buffer. The parking areas would be connected to the athletic fields and the cross-park trail by an 8-foot wide asphalt trail. Another 12-foot wide trail would follow the boundary between the athletic facilities and the wetland/habitat complex. The cross-park trail would provide connection between the beach area and parking in the central area of the park. Additional secondary pedestrian trails would be located within the wetland/habitat complex.

3.12.4.12 Parking

The proposed action would modify the existing parking supply in the following ways:

- Approximately 580 parking spaces located near the Commissary and Exchange facilities (Building 193) would be eliminated (as will that building). This parking lot recently provided temporary parking to employees of Children's Hospital for the duration of a construction project on the main hospital campus that has since ended. Long-term parking at this lot is not anticipated to continue into the period of construction of the proposed action.
- Beach Drive would be reconfigured to accommodate approximately 34 angled parking spaces, eliminating parallel parking along the drive. The Kite Hill Parking Lot would also be reconfigured from 73 to approximately 90 parking spaces. Currently, up to 170 vehicles can be accommodated in parallel parking along both sides of Beach Drive. During August 2001 parking utilization counts a maximum of 95 vehicles were parked on Beach Drive and a maximum of 57 vehicles were parked in the Kite Hill lot.
- The north ball-field parking lot and related access roadway, which currently provides on-street parking, would be eliminated. This would result in the loss of approximately 140 spaces in the

lot and parking for up to 160 vehicles along the roadway. During August 2001 parking utilization counts, a maximum of 24 vehicles were observed in the north ball-field parking lot and none along the roadway.

- The approximately 100 spaces on the south side of the existing Sand Point ball fields would be eliminated.
- New parking lots would be established at the south end of the sports fields (265), along Sportsfield Drive (209) and near the north end of the fields (158). The plans also provide for a pick-up/drop-off location at the south fields lot. This space would accommodate school buses and other buses that may be serving educational trips to the wetlands feature.

Up to 35 vehicles per soccer field and 30 vehicles per baseball field would require parking, for a total of 500 vehicles for the 15 fields, if all are in use at the same time, with more for short periods of time when games might overlap. It is estimated that up to 50 people at one time may be using the wetlands trails[5], generating the need for parking for 20-30 vehicles. This results in a peak demand for the proposed action of 530 vehicles, plus some additional for game overlap. The currently underutilized central parking lot (the North Sand Point lot) could accommodate the additional parking demand generated by occasions when all fields are scheduled and overlap of parking demand between games might occur.

Elimination of the current parallel parking along Beach Drive would create a negative impact during peak-use periods of the summer season when visitation to the beach area is highest. However, the reduction in parking supply near the beach area could be offset somewhat through use of the cross-park trail connecting the beach area with the central sector of the park, where there is a significant parking supply that is currently underutilized. Additionally, the new South Fields parking lot could help serve visitors planning to use both the wetland/habitat and beach areas. As noted previously, the parking supply in the park as a whole would remain ample to meet overall park demand, but parking near the beach area might be in short supply on occasion. This might be especially problematic for beach visitors who are burdened with picnic and personal recreation equipment.

Even with the net loss of parking spaces within the project site, the park would have adequate parking to serve all on-site demand. With the exception of a few special events, peak parking demand for all park activities would rarely exceed 1,600 parking spaces. Even with the project modifications to parking supply resulting in a net loss of approximately 790 parking spaces, the total park supply would be at least 2,250 parking spaces (not including new spaces that would be provided through other projects at the park). Park staff is currently reviewing basic concepts for managing the on-site parking to better meet the needs of various users. Optional parking program elements include limiting overlap scheduling of special events, signing and public information, special events management and optional internal shuttle services, and assignment and restriction of parking spaces, where necessary.

3.12.4.13 Transportation Concurrency

The City has implemented a Transportation Concurrency Project Review System to comply with one of the requirements of the Washington State Growth Management Act (GMA). The system as described in the DCLU's Draft Directors Rule 4-95 and the City's Land Use and Zoning Code, is designed to provide a mechanism that would determine whether adequate transportation facilities would be available

[5] Based on conversations with The Berger Partnership staff and observations at Red Town Trailhead.

"concurrent" with proposed development projects. Of the 30 total screenlines identified by the City, 4 are within the potential influence area of project traffic.

The "South of NE 80th Street" (#6.15) and the "East of I-5" (#13.13) screenlines are closest to the project site. The project trip distribution shown in **Figure 3.12-4** was utilized to estimate project impacts to all screenlines evaluated. The analysis (summarized in **Table 3.12-8)** indicates that under cumulative traffic volume conditions, the screenlines would have volume-to-capacity ratios less than the LOS standard. Therefore, the proposed project would meet the concurrency requirements established by Director's Rule 4-99, approved January 3, 2000. The rule cites traffic volume data collected in 1998. As of this writing, those volumes had not been updated. However, the actual growth in traffic volumes from 1998 to the present would not cause the volume/capacity standard to be exceeded, even with project volumes.

Table 3.12-8
Concurrency Analysis

SL #[1]	Location	Direction[2]	Capacity	1998 Volume	Project Traffic	V/C Ratio[3] (with project)	LOS Standard
13.13	East of I-5	EB	6,760	3,710	107	0.56	1.00
	NE Pacific St to NE	WB	6,760	4,460	13	0.66	1.00
	Ravenna Blvd						
6.15	South of NE 80th	NB	4,300	2640	10	0.62	1.00
	20th Ave NE to Sand	SB	4,300	1580	66	0.38	1.00
	Point Way NE						

1. SL = Screen Line
2. Direction, NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound
3. v/c = volume-to-capacity

3.12.5 Impacts of the Lesser-Capacity Alternative

This section describes the expected future conditions in the vicinity of the project site including the traffic volumes, planned improvements, parking, transit, non-motorized facilities, and operational analyses of the study area intersections, under the lesser-capacity alternative.

3.12.5.1 Lesser-Capacity Alternative Description

The components of the Lesser-Capacity Alternative are described in detail in **Section 2.3** of this EIS. **Section 3.12.5.3** describes the key elements of this alternative with respect to vehicle trip generation. In general, the lesser-capacity alternative includes:

- 7 natural-grass fields with no lighting (7 primarily for soccer and one for rugby)
- 1 soccer field with synthetic turf and lighting
- 2 baseball/softball fields with synthetic turf and lighting
- a wetland/habitat complex (similar to the proposed action, but somewhat less extensive)

The lesser-capacity alternative includes almost the same number of sports fields as the proposed action; the difference between the alternatives is primarily related to field surface composition and lighting.

Because the traffic analysis is based on peak conditions and determined trip generation under the assumption that all of the fields would be in use at the same time for both alternatives, the field surface and lighting factors would not cause a difference in trip generation during the weekday PM peak hour. This would be the case during the non-winter months when there is still enough light to schedule games during the PM peak hour of adjacent street traffic (1 hour between 4:00 – 6:00 PM). The proposed action includes more fields with synthetic, all-weather surfaces and lighting, allowing use during dark hours and on a more year-round basis. For purposes of this analysis, trip generation for the lesser-capacity alternative during the PM peak hour is anticipated to be the same as for the proposed action: during the peak hour of adjacent streets, 4:30-5:30 PM on weekdays, it was assumed that the same number of fields (15 total) could be scheduled for play. Because the lesser-capacity alternative was revised for the Final EIS to eliminate one of the proposed baseball/softball fields, this overstates slightly the trip generation for the lesser-capacity alternative. The magnitude of the change was not considered to be sufficient to warrant re-running the traffic analysis for this alternative, however.

The open space and wetland components of each alternative have similar attributes with respect to traffic and parking, and there would be no significant trip generation differences between the alternatives.

3.12.5.2 Construction Impacts

Construction impacts from the lesser-capacity alternative would be similar to those for the proposed action. The number of construction workers and the overall level of construction activity would be about the same or slightly less. Slightly fewer truck trips would likely be required, because the extent of grading and site modifications are somewhat less than the proposed alternative and the volume of fill material needed for sports fields would be slightly less. The reduced capacity alternative still includes the demolition and removal of Building 193 and several smaller structures, which would be potentially a large producer of truck trips, depending on the disposition of building materials from the demolished building.

3.12.5.3 Weekday PM Peak Hour Trip Generation

Because both of the action alternatives are anticipated to generate the same amount of peak hour traffic, it is estimated that the proposed sports fields and wetland/habitat complex for the lesser-capacity alternative would generate approximately 307 net new trips (266 entering/42 exiting) during the weekday PM peak hour.

3.12.5.4 Trip Distribution and Assignment

Trip distribution and assignment of project trips for the lesser-capacity alternative are the same as for the proposed action (see **Figures 3.12-4 and 3.12-5**).

3.12.5.5 Weekday PM Peak Hour Traffic Volumes

Traffic volumes for the lesser-capacity alternative are the same as for the proposed action (see **Figure 3.12-6**).

3.12.5.6 Traffic Volume Impacts for the Weekday PM Peak Hour

Traffic volume impacts for the weekday PM peak hour for the lesser-capacity alternative are the same as for the proposed action (see **Table 3.12-6**).

3.12.5.7 Weekday PM Peak Hour Intersection Operations

Weekday PM peak hour intersection operations for the lesser-capacity alternative are the same as for the proposed action (see **Table 3.12-7**).

3.12.5.8 Daily Trip Generation

Daily trip generation for the lesser-capacity alternative would vary slightly from the proposed action. Because the lesser-capacity alternative includes fewer all-weather and lighted fields, the sports field complex could accommodate fewer games per day.

Based on the same assumptions outlined for the analysis of the proposed action, daily trip generation for the lesser-capacity alternative is estimated to total 3,000 trips, of which 1,970 would be net new trips. This compares to 2,260 estimated net new daily trips for the proposed action.

3.12.5.9 Transit Service

The lesser-capacity alternative does not include changes in transit service. The Transit Division of King County Metro would determine any future changes in transit service with the project, based on their evaluation of need. It is anticipated that project-related demand for transit service could be accommodated without changes to the existing transit system.

3.12.5.10 Non-Motorized Facilities

The lesser-capacity alternative includes the same types of non-motorized traffic facilities (primary and secondary pedestrian ways, a cross-country trail, a cross-park trail and a bikeway) as the proposed action. There would be minor differences between the alternatives in the length and number of trail connections, with the lesser-capacity alternative having slightly less mileage of primary and secondary pedestrian ways.

3.12.5.11 Parking

The lesser-capacity alternative would modify the existing parking supply on the project site in the following ways:

- Approximately 580 parking spaces located near the Commissary and Exchange facilities would be eliminated (as would that building).
- The Kite Hill parking lot would remain in its existing configuration, with parking capacity of 73 spaces.

- Beach Drive would be reconfigured to eliminate the parallel parking on both sides (approximately capacity for 170 vehicles). This would be replaced with approximately 34 angled parking spaces on the east (Lake) side of the road.
- Unlike the proposed action, the existing sports meadow parking lot (143 spaces) and related access roadway (accommodating approximately 160 vehicles) would be retained.
- The approximately 100 spaces on the south side of the existing Sand Point Fields would be eliminated.
- New parking lots would be established at the south end of the sports fields (265 spaces), and along Sportsfield Drive (209 spaces). The plans also provide for a pick-up/drop-off location at the South Fields lot. This space would accommodate school buses and other buses that might be serving educational trips to the wetlands/habitat complex.
- Unlike the proposed action, a new North Fields parking lot would not be developed and the existing parking lot west of the Junior League of Seattle Playground (the North Sand Point lot) would be reconfigured from approximately 330 parking spaces to 185 spaces.

Peak parking associated with the athletic fields is assumed to be the same for both alternatives (530 vehicles plus some additional for game overlap). Due primarily to the differences in the retained sports meadow parking lot and the access drive to this lot, the lesser-capacity alternative has approximately 80 more spaces than the proposed action, even with the reduced capacity of the lot west of the Junior League of Seattle Playground. As is the case with the proposed action, this currently underutilized central parking lot could accommodate the additional parking demand generated by occasions when all fields are scheduled and overlap of parking demand between games might occur.

As with the proposed action, the elimination of parking along Beach Drive would create a negative impact during peak-use periods of the summer season. Again, however, the reduction in parking supply near the beach area could be offset somewhat through use of the cross-park trail connecting the beach area with the underused parking supply north of the sports fields. Additionally, the new South Fields parking lot could help serve visitors using both the wetland and beach areas. As noted, the parking supply in the park as a whole would be ample, but parking near the beach area may be in short supply on occasion. This might be especially problematic for beach visitors who are burdened with picnic and personal recreation equipment.

Even with the net loss of parking spaces within the project site, the park would have adequate parking supply to serve all on-site demand. With the exception of a few special events, peak demand for all park activities would rarely exceed 1,600 parking spaces. Even with the modifications to parking supply resulting in a net loss of approximately 710 parking spaces, the remaining total parking supply within Sand Point Magnuson Park would be approximately 2,330 parking spaces.

3.12.5.12 Transportation Concurrency

As the pm peak hour trip generation would not substantially change with the lesser-capacity alternative, the concurrency analysis for this alternative does not differ significantly from that provided in **Section 3.12.4.13**. The lesser-capacity alternative would meet concurrency requirements as established by DCLU Director's Rule 4-99.

3.12.6 Mitigation

This section of the transportation analysis identifies mitigating measures that would offset or reduce the potential transportation impacts of the proposed project.

3.12.6.1 Construction

A project-specific construction traffic plan for workers and truck deliveries/routes would be prepared, based on the guidance of the Sand Point Construction Management Plan, to minimize disruption to traffic flow on adjacent streets and roadways. This plan would consider the need for special signage, flaggers, route definitions, flow of vehicles, parking and pedestrians during construction and street cleaning. The plan would specify truck hauling routes and hours of construction activity.

3.12.6.2 Off-Site Intersections

Two study intersections would have poor operating levels of service with or without the effects of the proposed action. Because these operating conditions would not be caused by the project, no significant adverse traffic impacts would be attributable to the project and no mitigation is proposed for these locations.

3.12.6.3 Parking

The improved signage and pedestrian connections that are incorporated into the plan would help mitigate internal circulation and parking issues. Alternate parking locations within the park should be well marked to minimize or eliminate spillover parking from sports field events into adjacent neighborhoods. As noted, both the proposed action and the lesser-capacity alternative would result in a net loss of parking in the beach area, primarily due to eliminating parallel parking along Beach Drive. Adequate parking would be available for those park users visiting the beach, but they might need to park in other on-site lots and use pedestrian ways to reach the beach area at peak-use times. In order to accommodate those who wish to picnic at the beach but might have to walk from centralized parking, a few of the parking spaces located in the Kite Hill/Beach Drive parking lot should be limited for loading and unloading (10 minutes maximum). Beach and picnic gear could be unloaded/loaded before the vehicle is moved to/from parking elsewhere at the beach. In addition, a bus turnaround to be included in the reconfigured parking lot would allow organized groups using the beach to be bused to the site. Park staff could also provide variable signage along NE 65th Street, west of Sportsfield Drive that would inform beach visitors if parking at the beach lot is full and redirect them to other parking areas, where additional signage would direct them to the cross-park trail or cross-country trail.

To help with vehicular circulation throughout the park, the park should continue to pursue an additional access to Sand Point Way NE either near or at the NOAA access. Operational analysis indicates that the existing park entrances operate at acceptable levels during typical weekday PM peak hours of adjacent traffic, so the additional access is not critical. However, the additional access would prove especially helpful in processing vehicles on and off the site for special, large-attendance events using the community campus area of the park.

3.12.7 Cumulative Impacts

The Sand Point Reuse Plan adopted by the City in 1997 involves redevelopment of other areas on the Sand Point property that could contribute to an increase in usage of the overall site beyond that identified in this EIS. These projects could produce increased construction activity and related impacts associated with this redevelopment, and increased traffic both on- and off-site. Traffic generated by these other redevelopment activities was included in the analysis of 2007 operations for all alternatives, as was traffic expected from planned off-site developments that could affect the local street network. Therefore, the impact analysis for the alternatives includes the cumulative impacts of planned redevelopment on the entire Sand Point site and planned development in the surrounding community. As discussed in **Section 3.7.1**, the proposed action is not expected to promote significant off-site development or redevelopment that would generate additional future traffic, and thereby contribute to cumulative traffic impacts.

3.12.8 Significant Unavoidable Adverse Impacts

Development under the proposed action would result in unavoidable short-term construction impacts resulting from increased traffic related to construction worker vehicle trips, delivery of construction supplies and equipment, removal of demolition waste, and delivery of fill material needed for sports field construction. With procedures and limits prescribed through a project-specific construction management plan, these intermittent construction-related impacts would likely not be considered significant. No significant unavoidable adverse impacts to transportation facilities or traffic conditions have been identified for the operating period of the proposed action or the lesser-capacity alternative.